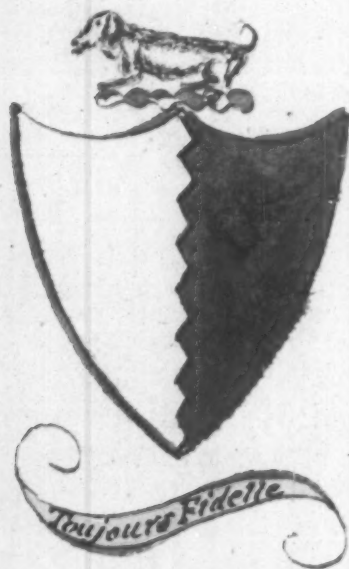


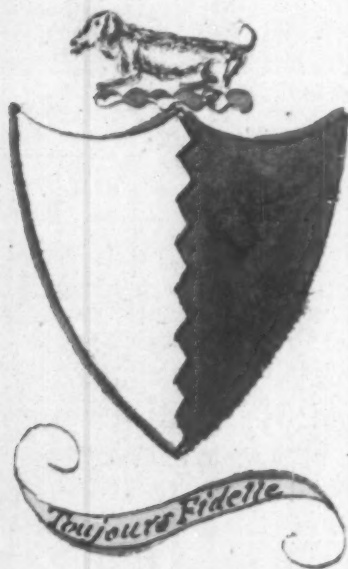
Joseph Hickman's.  
A Memorial of his affectionate,  
lamented Mary Ann.  
July 24<sup>th</sup> 1813.

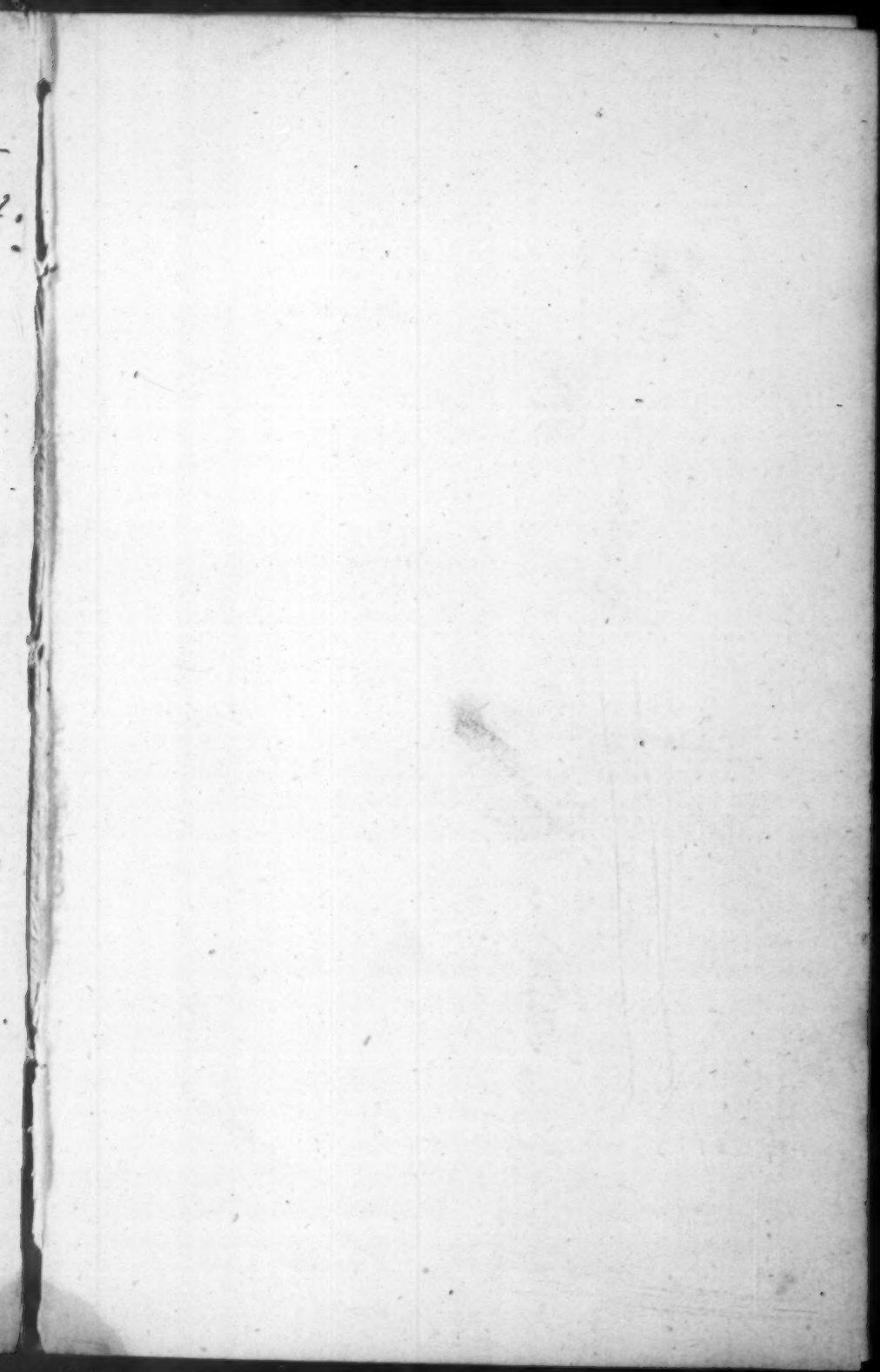
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Joseph Hickman's.  
A Memorial of his affectionate,  
lamented Mary Ann.  
July 24<sup>th</sup> 1813.

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Mary Ann Bacon.

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BRIEF ACCOUNT

OF THE

ARTS AND SCIENCES,

FOR THE INSTRUCTION OF YOUNG MINDS;

By R. BACON:

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DESIGNED FOR THE USE OF HIS OWN PUPILS.

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London:

PRINTED BY J. MOORE, W. C. - DRURY LANE.

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A

BRIEF ACCOUNT

OF THE

ARTS AND SCIENCES.

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Q. **W**HAT is meant by Science?

A. A clear and certain knowledge of something.

Q. What is an Art?

A. A knowledge which gives rules for doing a thing.

Q. How are the arts divided?

A. Into liberal and mechanical.

Q. Which are the liberal arts?

A. Those that belong to the sciences; as philosophy, rhetoric, grammar, mathematics, painting, music, sculpture, &c.

Q. Why are they called liberal?

A 2

A. Because

A. Because only the *liberi*, or free men, practised them among the ancients.

Q. Which are the mechanic arts?

A. Those that are commonly known by the name of trades.

Q. Which are the principal sciences?

A. Theology, Philosophy, Jurisprudence, Medicine, Rhetoric, Grammar, Poetry, and the Mathematics.



# OF THEOLOGY

AND

## RELIGION.

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Q. **W**HAT is understood by Theology, or Divinity.

A. The word Theology is derived from two Greek words, which signify *the word of God*; it is therefore a science which instructs us in the knowledge of God, and divine things.

Q. How is Theology divided?

A. Into natural and revealed.

Q. What is natural Theology?

A. The knowledge we have of God, by his works, and by the light of nature.

Q. What is revealed Theology?

A. The knowledge we obtain of God by faith and revelation.

Q. To what does the knowledge of Theology direct us?

A. When man is come to the knowledge of the Divine Being, either by reason or revelation,

he then renders worship to him, after that manner he conceives to be most agreeable to his will.

Q. What is the worship of God called?

A. Religion.

Q. How many systems of religion are there in the world?

A. Four; viz.—That with the Christians, called Christianity; that with the Jews, called Judaism; that with the followers of Mahomet, termed Mahometanism; and that with Heathens, called Paganism.

Q. In what did the religion of the Pagans, or Heathens, consist?

A. In Polytheism; or, a plurality of gods.

Q. Is it not also called Idolatry?

A. Yes; because they worshipped their divinities by various representations, called idols, or images.

Q. What were the false gods of antiquity?

A. Either men, fictitious persons, beasts, &c. or inanimate things.

Q. What is the religion of the Mahometans?

A. Mahometanism is a compound of Judaism, Paganism, and Christianity.

Q. What are the fundamental articles of it?

A. They believe there is but one God; and that Mahomet,



Mahomet, their great prophet, was sent from God.

Q. What is the religion of the Jews ;

A. They believe, as we do, every thing that is contained in the Old Testament.

Q. Where may we learn the principles of their religion ?

A. The books of Moses contain the system of Judaism at large.

Q. Why were the professors of this system called Jews ?

A. From Judah, one of the sons of Jacob ; and the head of the principal of the twelve tribes.

Q. Were they not also called Hebrews ?

A. Yes ; either because Abraham was of the family of Heber, or else from a word which signifies to pass over ; because he passed over the river Euphrates to come into the land of Canaan.

Q. Why were they called Israelites ?

A. From being the descendants of Jacob, who received the appellation of Israel.

Q. What were the principal Sects of Judaism ?

A. The Pharisees, Sadducees, and Essenes.

Q. Do they still remain ?

A. At present there are but two ; the Karaites, and the Rabbinists.

Q. Who

Q. Who are the Karaites ?

A. Those who admit of no rule of religion, but the law written by Moses.

Q. Who are the Rabbinists ?

A. Those who, to the law, add the traditions of the Talmud, and are properly the followers of the old Pharisees.

Q. What is the Talmud ?

A. The body of the Hebrew law, and expositions of duties imposed on the Jews.

Q. Which is the true religion ?

A. The Christian religion.

Q. Where do you find it ?

A. In the Holy Scripture, or the word of God, containing the Old and New Testament.

Q. What are the duties it enjoins ?

A. They are threefold ; viz. 1. Such as belong to God. 2. Such as relate to our neighbour. 3. Such as concern ourselves.

Q. What is your duty to God ?

A. It is summed up in the Church Catechism.

Q. What is your duty to your neighbour ?

A. It is also contained in the Church Catechism, and is briefly expressed in the Christian's golden rule ; " To do to others, as we would they should do unto us."

Q. What is the duty we owe to ourselves ?

A, A true

A. A true Christian loves himself, as becomes his nature, and the will of God ; and his actions are regulated accordingly.

Q. Are there not several sects or opinions among the Christians ?

A. Yes ; there are three principal sects, viz. the Greeks, or adherents to the Greek Church ; the Papists, or Roman Catholics ; and the Protestants.

Q. Where may we find the tenets of the Greek Church ?

A. In Philips's Catechism.

Q. Where are the distinguishing tenets of the Romish church collected ?

A. In the Creed formed by the Council of Trent.

Q. Why are the followers of the Church of Rome called Papists ?

A. From the Pope, who is the head of their Church.

Q. Why are they called Romans ?

A. From Rome, the residence of their Popes.

Q. Who were the Protestants ?

A. A large body of people, who, in the time of Henry the VIIIth, protested against the doctrines and superstitions of the Church of Rome.

Q. Have

Q. Have not the Protestants, since their general reformation, been variously subdivided from each other ?

A. Yes ; and according to their different opinions and practices have obtained peculiar names.

Q. Who are those called Lutherans and Calvinists ?

A. The followers of Martin Luther, and John Calvin ; two of the first reformers.

Q. Who are the adherents to the Church of England ?

A. Those who follow the reformation, begun by Henry the VIIIth. This is established by Parliament, and is therefore the National Church.

Q. Who are Arminians and Socinians ?

A. The followers of James Arminius, and Socinus.

Q. What is Arminianism ?

A. The doctrine of free-will, and universal redemption.

Q. Whom do you mean by Arians ?

A. Those who deny the Divinity of Christ.

Q. Who are the Unitarians ?

A. Those who allow but one person, viz. of the Father, in the Godhead.

Q. Who

Q. Who are the Trinitarians?

A. Those who assert three persons in the God-head, as of the Father, Son, and Holy Ghost.

Q. What are those called who do not join with the established church?

A. Non-conformists and Dissenters.

Q. Whom do you call Presbyterians?

A. Those who differ from the Church of England, in point of discipline and divine service; who allow no bishops, and no subordination in the persons of their ministers.

Q. Who are the Independents?

A. They differ from Presbyterians chiefly in the manner of discipline; and deny all dependency on any other assembly.

Q. What do you understand by Anabaptists, or Baptists?

A. Those who do not admit any to be baptized till they arrive at years of discretion.

Q. What is meant by the term Quakers?

A. Quakers are so called, because they used to shake and tremble in their religious meetings. The system of Quakerism is largely set forth in their Apology, by Robert Barclay.

Q. Who are the Methodists?

A. The Methodists do not dissent from the established Church; and maintain the doctrine of  
Christian



Christian Perfection. John Wesley published "A Plain Account of the People called Methodists."

Q. Why were they so called?

A. Because a few young men, at the University of Oxford, among whom was the celebrated John Wesley, used to have religious meetings. They were called Methodists, in imitation of a Society of Physicians, so called, at Rome.





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PART II.

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OF PHILOSOPHY.

Q. WHAT is meant by Philosophy?

A. It signifies *the love of wisdom or knowledge*, and it is the study of nature and morality, founded upon reason.

Q. Into how many parts is it divided?

A. Into four; viz.—Logic, metaphysics, morality and physics.

OF LOGIC.

Q. WHAT is Logic?

A. The art of using reason well, in the knowledge of things, both for our own instruction, and that of others.

Q. In what consists this art?

A. In the reflection made upon the four principal faculties of the mind; viz. perception, judgment, reasoning, disposition.

OF METAPHYSICS.

Q. WHAT is Metaphysics?

A. It is a science applied only to the contemplation of God, angels, and spiritual things; and judges of them, independent of material things.

Q. In what does the study of Physics differ from this science?

A. Physics treat of natural things, and judge of them from experience.

OF MORALITY.

Q. WHAT does morality teach us?

A. Rules for our manners and conduct, whether in public or private life.

Q. Which is the best treatise of morality?

A. An excellent book, entitled *The Whole Duty of Man*.

OF PHYSICS.

Q. WHAT is understood by Physics?

A. It is derived from a Greek word, which signifies *nature*.

Q. Of what does it treat?

A. Of

A. Of all natural things, and teaches us to explain all the phœnomena of the heavens and earth.

Q. Into how many parts is natural Philosophy divided ?

A. It may be properly divided into four parts ; viz. Somatology, Aerology, Astronomy, and Geology.

## S O M A T O L O G Y.

Q. WHAT is Somatology ?

A. It signifies the doctrine of natural bodies ; and considers the various properties of matter.

Q. What is matter ?

A. Matter is that which we call the substance of things.

Q. Repeat a few of the sensible properties and qualities of matter ; viz. first, what is light ?

A. Light is the quality of that sort of matter we call fire ; the objects it proceeds from, and those which receive it, are rendered visible by it.

Q. What does it consist of ?

A. Very small particles, which come from the luminous body in right lines to the eyes.

Q. With how great velocity does light proceed ?

B 2

A. Near

A. Near two hundred thousand miles in a second of time.

Q. Why do some bodies appear dark and black?

A. Because they do not reflect light; those bodies which do reflect it, become visible, and coloured.

Q. What is colour?

A. Colour is that quality in bodies, which is better known than described.

Q. Why do some bodies appear red, blue, yellow, &c.?

A. Because the matter, of which they consist, reflects more red, blue, yellow, &c. rays than others.

Q. Why do some bodies appear white?

A. Because they reflect, promiscuously, all the rays which fall upon them.

Q. What is sound?

A. An effect caused by striking a sonorous body.

Q. How is it occasioned?

A. The tremulous motion of the parts agitates the air, like waves in water; which, striking on the drum of the ear, excite<sup>d</sup> sound.

Q. At what rate is sound supposed to move?

A. Eleven hundred and forty-two feet in a second of time.

Q. What is echo?

A. The

A. The reverberation of a wave of air, from the surface of some obstacle; whence, flying back, it is repeated to our ears.

Q. What does heat consist in?

A. In a violent agitation of the particles of hot bodies; which, acting on us, excite that idea.

Q. What does cold proceed from?

A. From the motionless state of the particles of cold bodies.

Q. What are odours, or smells?

A. They are those exceeding fine parts which fly off from the odoriferous body, and perfume the air.

Q. What are savors, or tastes?

A. They are saporific particles in bodies, affecting the palate.

## A E R O L O G Y.

Q. WHAT is Aerology?

A. A description of the air, and of meteors.

Q. What is a meteor?

A. Whatever is engendered in the air that surrounds us.

Q. What are meteors composed of?

A. Vapours and exhalations.



Q. What are Vapours ?

A. Particles of water, attracted by the sun, into the air.

Q. What are exhalations ?

A. Particles of different earthly bodies that rise into the air ; viz. sulphurs, salts, &c. and other gross and combustible bodies.

Q. Why are exhalations more abundant in Summer ?

A. Because they require more heat, than vapours do, to put them in motion.

Q. What does rarefaction mean ?

A. Rarefaction is caused by heat ; as when milk is heated over a fire, it is expanded, and takes up a larger space.

Q. What is condensation ?

A. That is occasioned by cold, when a body is confined within less space than it was before.

Q. What is air ?

A. A transparent invisible fluid, spread around the earth, nearly a thousand times lighter than water.

Q. Does not the higher air differ from that which is lower ?

A. Yes ; The higher you ascend from the earth, the air is thinner and colder.

Q. What is wind ?

A. As



A. As a river is a stream of water, so is wind a stream, or current of air.

Q. What is wind, or the motion of the air, occasioned by ?

A. It proceeds from various causes ; but chiefly from heat.

Q. How is the air put in motion by heat ?

A. Because heat rarefies the air, and causes it to ascend ; the place it left is supplied by the adjacent air, and thus there is a current of air towards the place where the heat is.

Q. What is the use of the wind ?

A. It cools and purifies the air, and renders it healthful ; it also carries the clouds and rain, and has many other excellent uses.

Q. Which are the four principal winds ?

A. They take their names from the four quarters of the world ; viz. North, East, South, West.

Q. What is the property of the North wind ?

A. It is very cold, because it blows from the frigid zone.

Q. What of the East wind ?

A. That also is cold, and very dry ; because it blows from Asia, where there are few seas.

Q. What is the property of the South wind ?

A. It

A. It is the warmest ; because it comes from hot countries in the torrid zone.

Q. What are the qualities of the West wind ?

A. It is generally damp, and often blows rain ; because it crosses the Atlantic Ocean, where many vapours rise.

Q. Is not the air sometimes seen to move in contrary directions ?

A. Yes ; often before thunder ; the clouds will then move one way, while the weather-cock points another.

Q. What do red clouds in a morning presage ?

A. They presage wind ; and a reddish colour scattered about the skies is a quantity of vapours, rarefying themselves, and causing wind.

Q. What are mists ?

A. Collections of vapours, which rise from fenny moist places.

Q. What are clouds ?

A. Misty vapours suspended in the air, and carried along by the wind.

Q. What are fogs ?

A. Fogs only differ from clouds in being heavier, and remaining nearer the earth.

Q. What is rain ?

A. Thick

A. Thick clouds condensed by cold; which, being heavier than air, fall to the ground in drops of water.

Q. What is rime?

A. When the melting cloud is greatly rarefied, and its drops pass through warm air, they become very small, and form only rime.

Q. How is dew formed?

A. From a quantity of small particles of water, floating like vapours in a calm air; these being condensed by the coldness of the night, and many uniting together, they fall like a very fine rain, of short continuance; and appear, in the morning, like pearls, upon leaves and plants.

Q. In what manner is snow formed?

A. In the cold regions of the higher air; as soon as the clouds begin to change into very fine drops of water, each of them freeze<sup>s</sup>; and, several uniting together, form flakes of snow.

Q. Why are these flakes so light?

A. Because the little space, between the frozen particles, is filled with thin air, which causes their lightness.

Q. What is the cause of their whiteness?

A. The particles of ice, which compose the flakes, being solid, transparent, and differently placed, they reflect the light from all parts.

Q. Does

Q. Does not the snow injure plants?

A. On the contrary; it brings with it the subtile parts of nitre, and therefore it nourishes them.

Q. How is hail formed?

A. From drops of rain, which are frozen as they fall.

Q. What is ice and freezing occasioned by?

A. By nitrous particles; which, being sharp, enter the pores of water, dew, &c. and harden them into what we call ice, frost, &c.

Q. What is thunder?

A. When several clouds, variously formed, of vapours and exhalations, are driven violently together, the air which is pent up between them forces itself out with a tremendous noise, which is called thunder.

Q. From what proceed the continued rollings, and repetition of the thunder?

A. From a kind of echo formed in the clouds, and from solid bodies upon the earth, which send back the sound.

Q. What is lightning?

A. When the sulphureous and nitrous exhalations are so violently agitated, as to kindle into a flame, it spreads itself to every thing that is combustible, and causes lightning.

Q. Why

Q. Why do we sometimes see lightning, without hearing thunder?

A. Because the exhalations sometimes take fire, without the upper cloud falling so violently on the lower, as to occasion any noise.

Q. What is that which is commonly called a thunderbolt?

A. It is a solid and most rapid flame, descending from the clouds to the earth, opposing every thing in its way.

Q. What are its effects?

A. It sometimes kills men and beasts, burns and overthrows large trees and buildings, and sets fire to every thing it comes near.

Q. How is it that we do not hear the thunder so soon as we see the lightning?

A. Because light flies swifter than sound; for by observing a gun discharged at a distance, we see the fire before we hear the sound.

Q. What is the iris, or rainbow, occasioned by?

A. By the refraction, or variation, of the sun's rays on drops of falling rain or dew, thence reflected to our eyes.

Q. What are the colours of the rainbow?

A. Violet, Indigo, Blue, Green, Yellow, Orange, Red.

Q. What is an Halo?

A. A circle



A. A circle sometimes seen round the sun or moon, in rimy or frosty seasons.

Q. What does it proceed from?

A. From the refraction of light in the hailstones in the air.

Q. What are those meteors which are commonly called falling stars?

A. Exhalations which are kindled without the violence that thunder is; and, taking fire gradually, they are continually driven back, till they are extinguished, and appear like sky-rockets.

Q. What is the Aurora Borealis?

A. That shining light which is often seen by night, in the heavens; and which the vulgar call northern lights, or streamers.

Q. What are they occasioned by?

A. They are nitrous and sulphureous vapours, thinly spread through the atmosphere, higher than the clouds, where they ferment and take fire successively.

Q. What is the ignis fatuus?

A. Vapours similar to those which appear like falling stars; they are wafted about near the earth, like a light in a lanthorn, and are vulgarly called jack-with-a-lanthorn.

Q. What is an earthquake?

A. A bursting



A. A bursting forth of exhalations, pent up in caverns, near the surface of the earth.

Q. Are they attributed to no other cause ?

A. They are also ascribed to electric matter rushing along the surface of the earth, and communicating with that within it.

Q. What are volcanos ?

A. Subterraneous caverns, which send forth torrents of smoke and flames, rivers of melted metals, and clouds of ashes and stones.

Q. Which are the most famous in the world ?

A. Etna, in Sicily ; Vesuvius, near Naples ; and Hecla, in Iceland.

Q. What is meant by the tides ?

A. The alternate flux and reflux of the sea.

Q. How often does this happen ?

A. The waters of the ocean swell twice in about four-and-twenty hours ; and as often subside again.

Q. What is it occasioned by ?

A. By the influence of the moon, which attracts the waters that are immediately under it up in a heap.

END OF THE SECOND PART.

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## PART III.

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### OF ASTRONOMY.

Q. **W**HAT is Astronomy?

A. A science which treats of the heavenly bodies.

Q. What is the Sun?

A. That glorious luminary, the source of light and heat to the world.

Q. Is the sun larger than the earth?

A. Yes; about a million times larger.

Q. Why does it appear so small?

A. On account of its distance; which is so great that a cannon ball would be twenty five years coming from thence to the earth.

Q. Does the sun move, or is he fixed?

A. He always remains fixed, and the earth and planets move round about him.

Q. What is the Moon?

A. A dark globe, which receives light from the sun, and reflects it to the earth, to enlighten us by night.

Q. Why

Q. Why does she appear to us with so many different degrees of light ?

A. At *new* moon she is between the sun and the earth, and her enlightened parts are turned from us ; when *full*, the earth is between her and the sun, and we see all her enlightened side ; she appears a horned or half-moon, when a little part of her light turns towards us.

Q. Why do some parts of the moon's face look dusky, and others light ?

A. The bright parts are land, and the darker parts water, &c.

Q. Is the moon larger than the earth ?

A. No ; the earth is fifty times bigger.

Q. How are the stars distinguished ?

A. Into fixed stars and planets.

Q. What are fixed stars ?

A. They are supposed to be so many suns, having planets moving round them.

Q. What is a planet ?

A. A star that has a regular motion.

Q. How many planets are there ?

A. Six ; reckoning according to their nearness to the sun.—1. Mercury.—2. Venus.—3. The Earth, attended by the moon.—4. Mars.—5. Jupiter, attended by four lesser moons,

called Satellites.—6. Saturn, attended by five moons.

Q. Do these planets, like fixed stars, shine by their own light ?

A. No ; they receive their light from the sun.

Q. What is the use of the moon and planets ?

A. They are worlds, or places of habitation, for creatures.

Q. What is a comet ?

A. A large solid body, with a long transparent train.

Q. What is the earth ?

A. The globe we inhabit.

Q. What is the cause of day and night ?

A. The revolution of the earth on its axis ; for while one side is turned towards the sun, and is enlightened, the other, in consequence, is dark ; and this happens every twenty-four hours.

Q. What produces the four seasons of the year ?

A. The revolution which the earth makes round the sun, in 365 days six hours.

Q. How fast does the earth move ?

A. It turns round at the rate of fifty-eight thousand miles every hour.

Q. What is the earth's orbit, or that in which the sun seems to move, called ?

A. The

A. The Ecliptic ; which is divided into twelve signs, viz.

♈ Aries

♎ Libra

♉ Taurus

♏ Scorpio

♊ Gemini

♐ Sagittarius

♋ Cancer

♑ Capricornus

♌ Leo

♒ Aquarius

♍ Virgo

♓ Pisces

Q. What is a constellation ?

A. A system of several stars, distinguished by the form of certain animals.

Q. What is the galaxy, or milky way ?

A. It appears like a broad circle of whitish hue, going round the heavens ; and is occasioned by the light of a great number of very small stars,

Q. What is an Eclipse ?

A. A privation of light in the sun or moon.

Q. When does an eclipse of the sun happen ?

A. When the moon comes between the earth and the sun, and deprives us of his light.

Q. How does an eclipse of the moon happen ?

A. When the earth comes between it and the sun ; for the moon, having no light of her own, when the rays of the sun are intercepted from her, she appears dark.

Q. What is an equinox ?



A. When the days and nights are equal all over the world; there are two, viz. the *vernal equinox*, the 21st of March; and the *autumnal equinox*, the 22d of September.

Q. What light is that which appears before sun-rise, and after sun-set?

A. That before sun-rise is called the dawn; and that after sun-set is twilight.

## G E O L O G Y.

Q. WHAT is Geology?

A. Geology is a description of the *terraqueous globe*.

Q. How is this branch of philosophy divided?

A. Into two parts; Geography and Hydrography.

Q. What is Hydrography?

A. It delivers the doctrine of the sea, and all kinds of waters.

Q. How is Geography divided?

A. Into four parts; namely, Mineralogy, Philology, Zoology, and Geography especially so called.

Q. What does Mineralogy treat of?

A. Of subjects dug out of the earth; such as earths, ores, fossils, minerals, stones; and other extraneous bodies.

Q. What are called earths?

A. Soft



A. Soft substances ; such as clay, marle, sand.

Q. What are ores ?

A. Earths containing particles of metal ; as gold ore, silver ore, &c.

Q. What are fossils ?

A. They are all bodies dug out of the earth.

Q. What are minerals ?

A. Such fossil bodies as are hard and brittle, as chalk, coal, &c.

Q. What are metals ?

A. Simple fossil bodies that may be melted by fire, or beaten by a hammer ; as gold, silver, copper, iron, tin, lead.

Q. What are the Qualities of these metals ?

A. Gold is the heaviest and purest metal ; silver is next to gold in fineness ; copper is next to silver in weight ; iron is the hardest and most brittle of all ; tin is the lightest, and softest, except lead ; lead is next to gold in weight, and the softest of all metals.

Q. How are stones distributed ?

A. Into two classes ; vulgar and precious.

Q. What are called vulgar stones ;

A. Marble, flint, free-stone, pumice-stone, common stones, pebbles, &c.

Q. What are precious stones ?

A. Those

A. Those which are called gems, or jewels; and have various names.

Q. What does Phytology treat of?

A. Phytology, or Botany, treats of the nature of vegetables.

Q. What is Zoology?

A. It treats of the various kinds of animals; and is termed Natural History.



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## PART IV.

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### OF GEOGRAPHY.

Q. **W**HAT is Geography, especially so called?

A. A description of the world, as it is composed of land and water.

Q. What is the size of the earth?

A. It is about twenty-five thousand miles round.

Q. How much is land?

A. About one quarter of the world; and the other three water.

Q. What is the form of the earth?

A. Round, or spherical.

Q. How is the situation of places determined?

A. By their latitude and longitude.

Q. What do you mean by latitude?

A. How far they lie North or South.

Q. What is longitude?

A. How far they lie East or West.

Q. How is land divided?

A. Into

A. Into

Continents.

Islands.

Peninsulas.

Isthmuses.

Capes, or

Promontories.

Mountains, and

Vallies.

Q. What is a Continent ?

A. A large tract of land, containing several countries, not entirely separated by water, as Europe.

Q. What is an island ?

A. A smaller part of land, entirely surrounded by water, as Great Britain.

Q. What is a Peninsula ?

A. Land almost surrounded by water, as the Morea in Greece.

Q. What is an Isthmus ?

A. A neck of land, which joins a peninsula to the neighbouring country, as the Isthmus of Corinth, in the Morea.

Q. What is a Promontory ?

A. High land, extending itself into the sea ; the end of which is called a Cape ; as the Cape of Good Hope, in Africa.

Q. What is a Mountain ?

A. A rising part of land ; which, if it only rises to a small height, is called a hill ; a mountain, which

which casts out fire, is called a volcano; as Ætna, in Sicily.

Q. What is a valley?

A. A plain, or level country, surrounded by hills.

Q. What is a Coast, or Shore?

A. That part of land which borders on the sea.

Q. Are there any other definitions of land?

A. Woods are tracts of land, covered with trees; a large wood is called a forest; a small one a grove; there are also desarts; which are barren countries, producing nothing.

Q. How is water divided?

A. Into

Oceans.

Seas.

Gulphs.

Straits.

Lakes.

Rivers.

Q. What is an Ocean?

A. A large body of water, which separates one part of the world from another; as the Atlantic.

Q. What is a Sea?

A. A less body of water, which separates one country from another; as the Mediterranean.

Q. What is a Gulph;

A. An arm of the sea, almost surrounded by land; as the gulph of Venice.—A small gulph is called a bay; as the Bay of Biscay.

Q. What is a Strait?

A. A nar-



A. A narrow passage, out of one sea into another ;  
as the Straits of Gibraltar, at the entrance of  
the Mediterranean.

Q. What is a lake ;

A. A great body of standing water, surrounded by  
land ; as the lake of Geneva, in Switzerland.

Q. What is a River ?

A. A large body, or stream, of fresh water ; a  
small river is called a rivulet, or brook. A  
marsh, fen, bog, or morass, is a collection of  
water, mixed with mud and mire.

Q. How is the earth divided, with respect to  
its inhabitants ?

A. Into Empires, kingdoms, and Republics.

Q. Which are the four quarters of the world ?

A. Europe.

Asia.

Africa, and

America.

Q. What is the extent of Europe ?

A. Three thousand miles in length ; and two  
thousand five hundred in breadth.

Q. How is it bounded ?

A. On the North, by the Frozen Ocean ; on the  
East, by the river Don ; on the South, by the  
Mediterranean Sea ; and on the West, by the  
Atlantic Ocean.

Q. How



Q. How is it divided ;

A. Into thirteen principal parts ; namely,

1. The British Isles.
2. Denmark.
3. Sweden.
4. Russia.
5. France.
6. Netherlands, or Low Countries.
7. Germany.
8. Poland.
9. Hungary.
10. Spain.
11. Portugal.
12. Italy.
13. Turkey.

Q. Which are the British Isles ?

A. Great Britain and Ireland.

Q. How is Great Britain divided ?

A. Into two parts ; England and Scotland.

Q. What is the extent of England ?

A. It is three hundred and eighty miles in length,  
and three hundred in breadth.

Q. How is it divided ?

A. Into forty Counties ; and Wales into twelve ;  
making together fifty-two.

Q. How are they named ?

A.	<i>Counties.</i>	<i>Chief Towns.</i>
Home Circuit.	{ Essex.	Colchester.
	{ Hertford.	Hertford.
	{ Kent.	Canterbury.
	{ Surry.	Guildford.
	{ Sussex.	Chichester.
Norfolk Circuit.	{ Bucks.	Buckingham.
	{ Huntingdon.	Huntingdon.
	{ Suffolk.	Ipswich.
	{ Norfolk.	Norwich.
	{ Bedford.	Bedford.
Oxford Circuit.	{ Cambridge.	Cambridge.
	{ Oxon.	Oxford.
	{ Berks.	Reading.
	{ Gloucester.	Gloucester.
	{ Worcester.	Worcester.
	{ Monmouth.	Monmouth.
	{ Hereford.	Hereford.
	{ Salop.	Shrewsbury.
Northern Circuit.	{ Stafford.	Stafford.
	{ York.	York.
	{ Durham.	Durham.
	{ Northumberland.	Newcastle.
	{ Lancaster.	Lancaster.
	{ Westmoreland.	Appleby.
	{ Cumberland.	Carlisle.

Midland

	<i>Counties.</i>	<i>Chief Towns.</i>
Midland Circuit.	Warwick.	Warwick.
	Leicester.	Leicester.
	Derby.	Derby.
	Nottingham.	Nottingham.
	Lincoln.	Lincoln.
	Rutland.	Okeham.
Western Circuit.	Northampton.	Northampton.
	Hants.	Southampton.
	Wilts.	Salisbury.
	Dorset.	Dorchester.
	Somerset.	Bristol.
	Devon.	Exeter.
	Cornwall.	Launceston.
	Middlesex.	London.
	Chester.	Chester.

Q. Which are the Counties in Wales?

A. Flint. Anglesey. Radnor. Pembroke.

*h.w.* { Denbigh. Caernarvon. Brecknock. Cardigan.  
 { Montgomery, Merioneth. Glamorgan. Caernarvon. *marthen* *S.W.*

Q. What are the produce and manufactures of England?

A. Corn in abundance, tin, all sorts of hardware, woollen cloths, and coals.

Q. What is the chief town of England?

A. London.

Q. What islands are subject to England?

A. The Isle of Wight ;—the Scilly Isles, at the Land's End ; and four others in the English Channel ; viz. Jersey, Guernsey, Alderney and Sark, are subject to England.

Q. How is Scotland, or North Britain divided ?

A. Into thirty-three Shires.

Q. What is the extent of it ?

A. It is three hundred miles in length ; and one hundred and ninety in breadth.

Q. What are its chief exports ?

A. Threads, lawns, and linen of their own manufacture. Their fisheries form no small article of Commerce.

Q. What is the chief town in Scotland ?

A. Edinburgh ; four hundred miles from London.

Q. What are the isles of Scotland called ?

A. The Shetland ; the Orkney ; and the Hebrides, or Western Isles.

Q. What is the extent of Ireland ?

A. It is two hundred and eighty-five miles in length ; and one hundred and sixty broad, in the widest part.

Q. How is it divided ?

A. Into four great provinces ; Leinster, the Eastern, Ulster, the Northern, Munster, the Southern, and Connaught, the Western provinces.

Q. What

Q. What is the chief town?

A. Dublin; two hundred and seventy miles from London.

Q. What is the trade of the country?

A. This country is famous for its linen trade; it exports also vast quantities of salted provisions, and butter; and is subject to England.

Q. Which are the dominions of the King of Denmark?

A. East and West Greenland, famous for the whale fisheries; Iceland; and Islands in the Atlantic.—Norway, Denmark, and his German territories.

Q. What is the chief town of Denmark?

A. Copenhagen; five hundred miles from London.

Q. What is the chief town of Norway?

A. Bergen, or Christiana; five hundred and forty miles from London. This country produces all sorts of timber, and is very mountainous.

Q. What is the chief town of Sweden?

A. Stockholm; seven hundred and fifty miles from London.

Q. From what does the chief wealth of it arise?

A. From its mines of silver, lead, copper, and chiefly iron.



Q. What is the chief town of Russia ?

A. Petersburg; eleven hundred and forty miles from London.

Q. What are its chief articles of commerce ?

A. Its timber and naval stores.

Q. What is the chief town of France ?

A. Paris; two hundred miles from London.

Q. What are its chief manufactures ?

A. Wine, cambrics, brandy, &c.

Q. Which are the Netherlands ?

A. Holland and Flanders.

Q. What is the chief town of French Flanders ?

A. Lisle; famous for its thread.

Q. What is the chief town of Austrian Flanders ?

A. Brussels; one hundred and eighty miles from London; where much lace is manufactured.

Q. How is Holland divided ?

A. Into seven parts; called the Seven United Provinces.

Q. What is the chief town of Holland ?

A. Amsterdam; one hundred and eighty miles from London; the East India Company have the monopoly of spices.

Q. Which is the seventh division of Europe ?

A. Germany; including Switzerland and Bohemia.

Q. How



Q. How is Germany divided ?

A. Into nine circles ; viz. Westphalia, Upper Saxony, Lower Saxony, Upper Rhine, Lower Rhine, Franconia, Suabia, Bavaria, and Austria.

Q. What is the chief town of Germany ?

A. Vienna ; six hundred miles from London ; the mineral waters of this country are much esteemed, and resorted to.

Q. What is the chief town of Switzerland ?

A. Berne ; four hundred and twenty miles from London.

Q. What is the chief town of Bohemia ?

A. Prague ; six hundred miles from London.

Q. What is the chief town of the King of England's German dominions ?

A. Hanover.

Q. What is the chief town of the King of Prussia's German dominions ?

A. Berlin ; five hundred and forty miles from London.

Q. Which is the eighth division of Europe ?

A. Poland ; including Lithuania and Prussia.

Q. What is the chief town of Poland ?

A. Warsaw ; seven hundred and sixty miles from London. This country abounds in corn and timber.

Q. What

Q. What is the chief town of Polish Prussia ?

A. Dantzic ; from whence corn is exported in vast quantities.

Q. What is the chief town of Royal Prussia ?

A. Koningsburgh.

Q. What is the chief town of Hungary ?

A. Presburg.

Q. What is the chief town of Spain ?

A. Madrid ; eight hundred miles from London.

Q. What are its chief articles of commerce ?

A. Wines ; particularly sack, Sherry, and mountain ;—fruits, iron, and fine wool ;—it imports also vast quantities of gold and silver, from the mines in South America.

Q. What is the chief town of Portugal ?

A. Lisbon ; eight hundred and fifty miles from London ; from whence the wine of that name comes ; Port wine is also made at Oporto ; it likewise exports salt and fruits. The island of Madeira, in the Atlantic Ocean, where much wine of its own name is made, is subject to Portugal.

Q. What is the chief town of Italy ?

A. Rome ; eight hundred and twenty miles from London ; so famous in history, now of little note.

Q. What is the chief town of Turkey ?

A. Con-

A. Constantinople; thirteen hundred and twenty miles from London.

Q. What does it produce?

A. Figs, olives, citrons, and other fruits, in very great perfection, with some drugs; it has many islands in the Archipelago, and Levant Seas, belonging to it, being part of ancient Greece.

Q. Which are the principal Seas in Europe?

A. The Mediteranean	}	Seas.
The Black		
The White		
The Baltic, and		
The German		

Q. Which are the chief Mountains?

A. The Peak, in England.		
Plinlimmon	}	in Wales.
and		
Snowdon		
The Grampian	}	in Scotland.
and		
Cheviot		
The Carliews in Ireland.		
The Dofrine in Norway.		
The Carpathian between Poland and Hungary.		
The Alps between France and Italy.		
The Pyren <sup>e</sup> es between France and Spain.		

The

The Apennines in Italy.

Vesuvius near Naples.

Ætna in Sicily.

Hecla in Iceland.

Q. Which are the rivers of most note?

A. The Thames

Severn

Humber

Forth

Tay

Spey

Shannon

Ban

Boyne

Liffey

Volga

Don

Nieper

Loire

Rhone

Garonne

Seine

Rhine

Maese

Scheldt

} in England.

} in Scotland.

} in Ireland.

} in Russia.

} in France.

} in Holland.

The Danube	}	in Germany.
Rhine		
Elbe		
Oder		
Wesel	}	in Poland.
Nieper		
Bog		
Niester		
Duero	}	in Spain.
Tagus		
Guidiana		
Po	}	in Italy.
Var		
Arno		
Tiber		
Danube	}	in Turkey.
Niester		
Nieper		
Don		

END OF EUROPE.

ASIA.

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## ASIA.

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Q. **W**HAT is the extent of Asia?

A. About four thousand eight hundred miles in length; and four thousand three hundred in breadth.

Q. How is it bounded?

A. On the North, by the Frozen Ocean; on the East, by the Pacific Ocean; on the South, by the Indian Ocean; and on the West, by the Red Sea, the Levant, and the River Don.

Q. Into how many principal parts is Asia divided?

A. Into eight principal parts.

Q. Which is the first division of Asia?

A. Russia; including Siberia, and Russian Tartary.

Q. What is the chief town of Siberia?

A. Tobolski.

Q. What countries does Russian Tartary contain?

A. Kasan, Astrachan, and part of Circassia.

Q. Which is the second division of Asia?

Q. Inde-



A. Independent Tartary ; whose chief town is Samarcand.

Q. Which is the third division of Asia ?

A. Chinese Tartary ; whose chief town is Chynian.

Q. Which is the fourth division of Asia ?

A. Turkey ; which is again subdivided, into several provinces ; viz.

*Provinces.*

Syria.

Holy-Land.

Natolia.

Diarbeck.

Irac.

Turcomania.

Georgia.

Curdistan.

*Chief Towns.*

Aleppo.

Jerusalem.

Bursa.

Diarbeck.

Bagdad.

Erserum.

Teflis.

Scherazer.

Q. Which is the fifth division of Asia ?

A. Arabia ; subdivided into three parts, viz.

Stony Arabia, the Deserts of Arabia, and the Happy Arabia ; the last has a very fertile soil, produces abundance of perfumes, and is famous for its dates.

Q. What is the capital of Arabia ?

A. Mecca ; the birth-place of the famous impostor Mahomet.

Q. Which is the sixth division of Asia ?

E

A. Persia,

A. Persia.

Q. What is the capital of Persia?

A. Ispahan.

Q. What are its produce and manufactures?

A. Fruits, wines, and drugs; and its manufactures, in silk and mohair, are esteemed equal to any in the world.

Q. Which is the seventh division of Asia?

A. India; divided into two parts; viz. India, within the river Ganges, or Mogul empire, and India beyond the Ganges.

Q. What are the chief towns of India within the Ganges?

A. Delhi and Agra.

Q. What are the chief towns of India beyond the Ganges?

A. Pegu and Siam.

Q. What is the eighth division of Asia?

A. China.

Q. What is the capital of China?

A. Peking;—Nanking and Canton are also very large cities; this country, which is of immense extent, and very populous, produces cotton, rice, and tea; and the people manufacture vast quantities of silk, and earthen ware, generally called china.

Q. What are the rivers of most note in Asia?

A. The

A. The Indus, Ganges, Tigris, and Euphrates.

Q. What mountains are there?

A. Olympus, Taurus, Caucasus, Ararat, Lebanon and Hermon, famous in sacred as well as profane history.—Asia also abounds in fruitful islands.

END OF ASIA.

E 2

AFRICA.

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## A F R I C A.

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Q. **W**HAT is the length and breadth of Africa?

A. About four thousand three hundred miles in length; and three thousand five hundred in breadth.

Q. How is it bounded?

A. On the North, by the Mediterranean sea, which separates it from Europe; on the East, by the Red Sea, and Indian Ocean; on the South, by the Southern Ocean; and on the West, by the Atlantic Ocean.

Q. How is it situated?

A. Between the tropics; and consequently is very hot; having the sun vertical, or shining, at noon, directly over their heads.

Q. How is Africa divided?

A. Into

A. Into nine principal parts; viz.—1. Barbary.—2. Biledulgerid.—3. Zaara, or the Desert.—4. Negroland.—5. Upper Guinea.—6. Lower Guinea.—7. Egypt.—8. Upper Ethiopia.—9. Lower Ethiopia.

Q. Where lies what is called the Barbary coast?

A. To the North, along the coast of the Mediterranean; and contains the following principal places; Morocco, Algiers, Tunis, and Tripoli.

Q. Where is the slave and gold coast situated?

A. In Guinea; the persons of the natives, who are sold for slaves; also gold and ivory are the chief articles of commerce.

Q. What is the capital of Egypt?

A. Grand Cairo; various wild beasts are natives of the country.

Q. What is there famous in the country?

A. The Pyramids and mummy-pits; the last containing the embalmed bodies of the ancient Ægyptians.

Q. What is the famous Cape of Africa?

A. The Cape of Good Hope, at the South extremity of the country; where ships of all nations stop, in their way to the East Indies; the Dutch have a fort here,

Q. What are the principal rivers in Africa?

AMERICA



A. The Niger, the Gambia, and the Nile; the last of which, by its annual overflow, supplies the place of rain, and fertilizes all Egypt.

Q. What are its mountains?

A. The Atlas, the mountains of the Moon, and the famous Peak of Teneriffe, three miles high.

Note. Africa has also many islands, subject to different states; some of which produce excellent wines.

#### END OF AFRICA.

AMERICA.



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## A M E R I C A.

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Q. **W**HAT is the length and breadth of America?

A. About nine thousand miles in length; and its greatest breadth, three thousand six hundred and ninety.

Q. How is it bounded?

A. On the North, by the Northern Ocean; on the East, by the Atlantic Ocean; on the South, by the Southern Ocean; and on the West, by the Pacific Ocean.

Q. How is it divided?

A. Into two great Continents, called the Northern and the Southern; which are joined by the isthmus of Darien.

Q. How is North America divided?

A. Into

A. Into eight principal parts; viz.

1. Labrador, or New Britain.
2. Canada, or Province of Quebec.
3. Nova Scotia.
4. Independent States, once British Colonies.
5. East and West Florida.
6. Louisiana.
7. New Mexico, and California.
8. Mexico, or New Spain.

Q. What part of North America now belongs to Great Britain?

A. Canada and Nova Scotia; the capital of which is Halifax. The other provinces have revolted from the Mother Country, and erected themselves into a republic.

Q. What is imported into England, from its American possessions?

A. Unwrought skins, furs, &c.

Q. Which are the principal mountains in North America?

A. The Apalachian mountains.

Q. Which are its rivers;

A. The Mississippi, the river St. Lawrence, and the Delaware.

Q. How is South America divided?

A. That is also divided into eight principal parts; viz.

1. Terra

- |                 |               |
|-----------------|---------------|
| 1. Terra Firma. | 5. Brazil.    |
| 2. Peru.        | 6. Paraguay.  |
| 3. Amazonia.    | 7. Chili.     |
| 4. Guiana.      | 8. Patagonia. |

Q. Which of these are subject to the Spaniards?

A. Terra Firma, Peru, Chili, and Paraguay, or La Plata, famous for their silver mines.

Q. Which are the principal mountains of South America?

A. The Andes.

Q. Which are its rivers?

A. The Amazonas, Rio de Plata, or Plate River, and the Oroonoko.

Note. America also abounds with very large lakes.

Q. Are there not many islands also in America?

A. Yes; and these are denominated the West Indies; in contradistinction to the East Indies, in Asia, beyond the Cape of Good Hope.

Q. To whom do these islands belong?

A. The richest and best are the property of the English.

Q. What is the produce of these islands?

A. Sugar and rum; the former extracted from the cane; the latter distilled from the molasses; the leaves also, and tops serve for provender for the cattle, and the refuse serves for fire.

Q. What

Q. What other articles do they produce ?

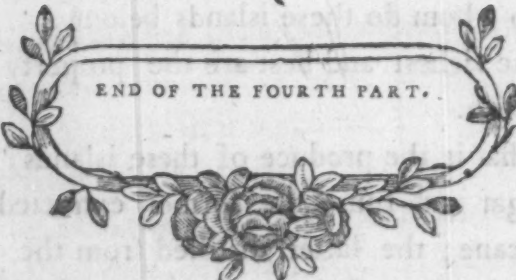
A. Pimento, or Jamaica pepper, indigo, and the wood called mahogany.

Q. What is the climate of the West Indies ?

A. Very hot, from their situation between the tropics.

Q. Are there not some newly discovered countries ?

A. There is a cluster of islands, between the eastern part of Kamptschatka, and the western part of America ; and others are situated in the South Seas. There are also many unknown countries.



END OF THE FOURTH PART.

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## PART V.

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### HISTORY.

Q. **W**HAT is History?

A. A narration of the most considerable transactions in the world.

Q. How is History divided?

A. Into sacred and profane; ancient and modern; universal and particular.

Q. What is sacred History?

A. The History of the Church of God, under the Old and New Testament.

Q. What is the subject of profane History?

A. The account of the heathen gods, demi-gods, and heroes.

Q. What is ancient History?

A. An account of all the transactions in the world, from the creation to the birth of Christ.

Q. How is ancient History divided?

A. Into four remarkable periods, called universal monarchies.

Q. Why



Q. Why were they called universal ?

A. Because each of them extended over the then known world.

Q. Which was the first monarchy ?

A. The Assyrian Empire, founded by Nimrod, and ended under Sardanapalus; having continued fourteen hundred years.

Q. What was the second monarchy ?

A. The Persian; which began with the reign of Cyrus, and ended with that of Darius, enduring about two hundred years.

Q. What was the third monarchy called ?

A. The Grecian; established by Alexander the Great, and continued no longer than his life.

Q. Which was the fourth monarchy ?

A. The Roman Empire; founded by Romulus, and continued under the twelve Cæsars, till the year of Christ 96.

Q. What is modern History ?

A. A relation of what has happened since the birth of Christ.

Q. What is universal History ?

A. Universal History includes every thing that has occurred in the world.

Q. What is meant by particular History ?

A. Particular, or civil History, concerns only a nation, a province, a family or a single person.

## OF JURISPRUDENCE.

Q. WHAT is Jurisprudence ?

A. The knowledge of the law, customs and statutes, necessary for the administration of justice.

Q. How is law distinguished ?

A. Into natural law, the law of nations, and the civil law.

Q. What is the law of nature ?

A. That which is derived from nature and reason, such as the power it gives parents over their children, &c.

Q. In what does the law of nations consist ?

A. In certain customs allowed of by all nations.

Q. What is civil law ?

A. The peculiar law and customs of a nation.

The civil law of England is divided into common, or magna charta, statute, canon or ecclesiastic, martial or military, forest, and the law of custom.

## OF MEDICINE.

Q. WHAT is the study of Medicine or Physic ?

A. It consists in the knowledge of the human body, and of such things as can preserve, or restore health.

Q. What are those persons called who possess this skill ?

A. Physicians.

Q. What are the parts of medicine ?

A. Anatomy, Surgery, Pharmacy and Chemistry.

Q. What is Anatomy ?

A. The art which teaches the structure, or construction of the human body, and the use of its several parts.

Q. By what means may we learn the structure and mechanism of the human body ?

A. By dissection, which affords a discovery of its parts ; and thus it may be known what would weaken, or strengthen its constitution.

Q. What is Surgery ?

A. Surgery, or Chirurgery, is that part of Physic which consists in the manual operations, in curing wounds, &c.

Q. What is Pharmacy ?

A. Pharmacy is the art of the Apothecary ; which teaches the preparation and composition of medicines.

Q. What is Chemistry ?

A. Chemistry is that part of medicine which teaches to dissolve mixed bodies, to separate the bad parts, and to collect and refine the good.

Q. Is

Q. Is not the knowledge of botany necessary in the study of physic ?

A. Yes ; because it includes the knowledge of all medicinal plants and herbs.

### OF RHETORIC.

Q. WHAT is Rhetoric, or Oratory ?

A. The art of speaking or writing well, and properly, on any subject.

Q. What are the qualifications of a good Orator ?

A. They are five ; viz. Invention, Disposition or Order, Elocution, Memory, Pronunciation.

Q. How many parts has an Oration ?

A. Five ; viz. Exordium, Narration, Confirmation, Confutation, Peroration.

### OF GRAMMAR.

Q. WHAT is Grammar ?

A. It is the art of rightly expressing our thoughts by words.

Q. How many sorts of words are there ?

A. Grammarians reckon nine, which are commonly called parts of speech ; viz. Article, Noun, pronoun, Adjective, Verb, Adverb, Preposition, Conjunction, Interjection.

Q. What are the rules of Grammar ?

A. In

A. In living languages, as the English, French, &c. custom is the best rule ; in the dead languages, as the Latin, Greek, &c. the rules are fixed.

### OF POETRY.

Q. WHAT is Poetry ?

A. A speaking picture, representing in verse the life and actions of a person.

Q. Which are the kinds of Poetry most in use ?

A. Pastoral or rural, Elegiac or mournful, Lyric *i. e.* Songs, &c. Pindaric or unequal, Satiric or invective, Dramatic, viz. plays, &c. Epic or Heroic, celebrating some hero ; besides Epigrams, Acrostics, Rondeaux, Sonnets and Madrigals.

